# A

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                              25
BVDV-1 CP7-9A  GUAUACGAGGG UUAGGCAAG. .UUCUCGUAU ACAUAUUGGA CACUCUAAAA AAAAUAAUU AGGCCUAGGG GACAAAAAUC CUCCCUUAGCG AAGGCCCGAAA  98
       Osloss  (AU)GUAUACGAGA AUUUGCCUA. .ACCUCGUAU ACAUAUUGGG CAUUCUAAAA A...UAAAUU AGGCCUAAGG GACAAA..UC CUCCCUUAGCG AAGGCCCGAAA  93
         NADL  GUAUACGAGA AUUAGAAAAG .GCACUCGUAU ACGUAUUGGG CAAUUAAAAA ...UAAUAAUU AGGCCUAGGG AACAAA..UC CCUCUCAGCG AAGGCCCGAAA  96
CSFV Alfort-T  GUAUACGAGAG UUAGUCU.. .UUCUCGUAU ACGAUAUUGG AUACACUAAA .UUUCGAAUU UGGUCUAGGU UGGUCUAGGU UGGUUCAGGC ACGGCCCAGCG  88
      Brescia  GUAUACGAGG UUAGUUCA.. .UUCUCGUGU ACAUGAUUGG ACAAAAUCAAA A.UCUCAAUU GGGUUCAGGU CCU...... CCUCCCAGCG ACGGCCCAGCG  90
    BDV X818   GUAUACGGGA GUAGCUCA. .UGCCCGUAU ACAAAAUCAAA AUAUUCCAAA A..CUCGAGG GGGUUAGGG AG....... CCUCCCGGCG ACGGCCCGAGC  87
   BVDV-2 890  GUAUACGAGA UUAGCUAAA .GUACUCGUAU ACGGAUUGGA CGUCGACAAA .CUUGAAUU GGCAACACAG GGAACCU..U CCCCGCGGCG AAGGCCCGAAA  96
                *******  *      *         *  ***    ** **      ***      **        * *      ***       **          *      ****** 
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B
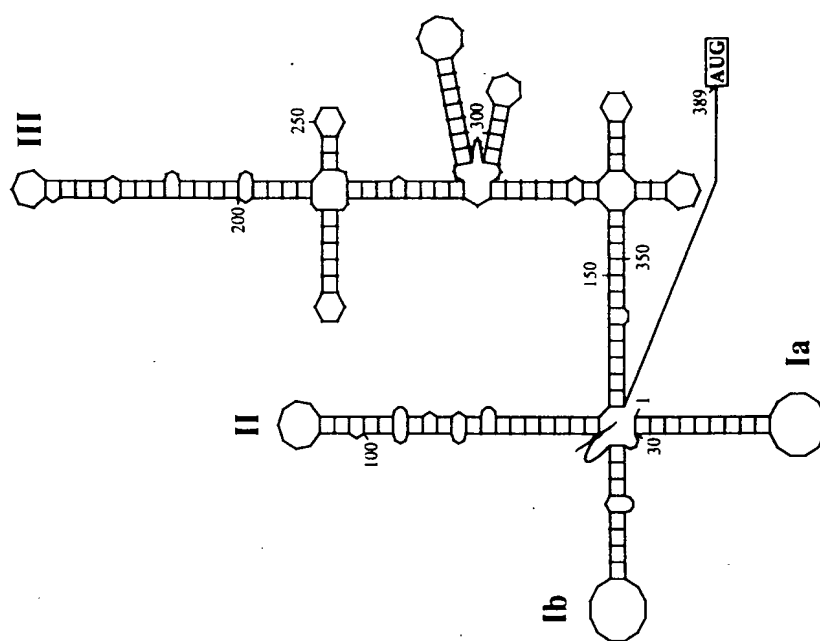
Figure 1

CP7-9A $\xrightarrow{\text{10 passages}}$ 9A, 9A, 10A, 10A, 11A, 11A
11A, 14A, 16A, 16A, 21A, 21A

CP7-20A $\xrightarrow{\text{10 passages}}$ 12A, 16A, 17A, 19A, 20A, 22A
23A, 24A, 30A, 31A, 33A, 36A

CP7-26A $\xrightarrow{\text{10 passages}}$ 35A, 37A, 38A, 39A, 39A, 40A
42A, 43A, 46A, 49A, 50A, 54A
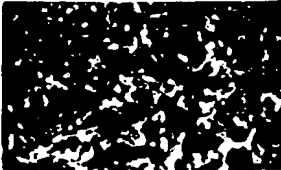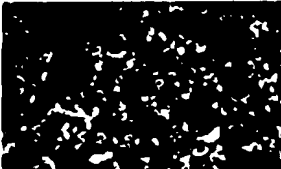
CP7-54A $\xrightarrow{\text{10 passages}}$ 5A, 5A, 7A, 7A, 7A, 15A
39A, 39A, 41A, 48A, 48A, 61A

CP7-5A $\xrightarrow{\text{10 passages}}$ 5A (12 x)

Fig. 2

Figure 3

	IF 24h p.t.	Infectivity (PFU/μgRNA)
CP7-5A		6.0×10^5
CP7-9A		5.2×10^5
CP7-20A		4.8×10^5
CP7-26A		4.8×10^5
CP7-54A		8.0×10^4
CP7-T		8.0×10^2
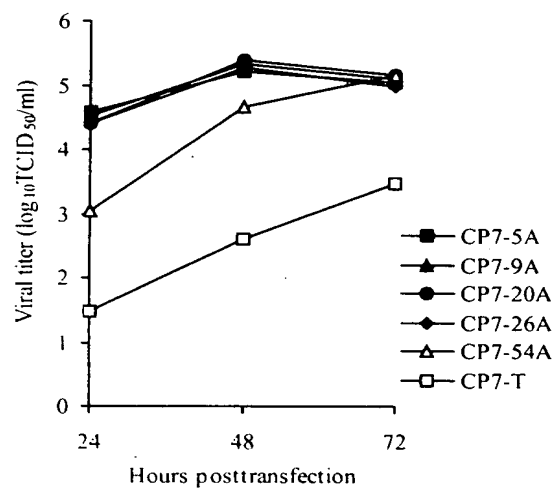
Fig. 4

A

CP7-5A

SL-1 (Δ2)

SL-2 (Δ6 - 7)

SL-3 (Δ14 - 17)

SL-4

SL-5

SL-6

SL-7

SL-8 (Δ1 - 24)
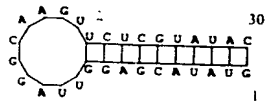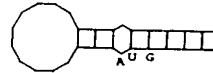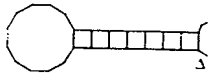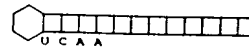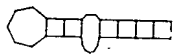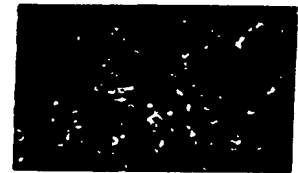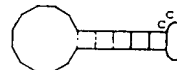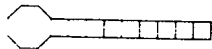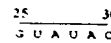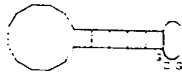
SL-9 (Δ2 - 29)

B

|	CP7-5A	SL-1	SL-2	SL-3	SL-4	SL-5	SL-6	SL-7	SL-8	SL-9
Infectivity (PFU/μg RNA)	2.4×10^5	4.4×10^1	2.8×10^4	4.0×10^4	< 10	6.0×10^4	6.4×10^4	4.8×10^4	5.2×10^3	6.4×10^2
TCID$_{50}$/ml 24 h p.t.	4.3×10^4	< 10	2.1×10^5	4.8×10^3	< 10	7.1×10^2	5.5×10^3	3.7×10^3	2.1×10^2	< 10
48 h p.t.	1.5×10^5	4.5×10^1	1.3×10^5	7.3×10^4	1.4×10^2	6.6×10^4	1.3×10^5	8.6×10^4	6.3×10^3	4.7×10^2
72 h p.t.	1.3×10^5	2.1×10^2	1.7×10^5	1.3×10^5	4.1×10^2	2.2×10^5	1.5×10^5	1.3×10^5	2.1×10^4	4.2×10^3

Fig. 5

A   CP7-5A   Δ 2 - 31   Δ 5 - 57   Δ 5 - 73

B

C

	CP7-5A	Δ 2-31	Δ 5-57	Δ 5-73
Infectivity (PFU/μg RNA)	2.4×10^5	6.0×10^3	1.0×10^4	2×10^1
TCID$_{50}$/ml 24 h p.t.	5×10^4	5.4×10^2	5.4×10^2	< 10
48 h p.t.	1.3×10^5	2.5×10^4	8.4×10^3	2.1×10^2
72 h p.t.	1.5×10^5	9.6×10^4	6.3×10^4	2.1×10^2

D

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              1                                                                                    100
CP7-5A guauacgagguuaggcaaguucucguauacauauuggacacucuaaaaauaauuaggccuaggggacaaaaauccuccuuagcgaaggccgaaaagaggc

Δ5-73                                                                   GUAUCCUCCUUAGCGAAGGCCGAAAAGAGGC
M1                                                                    GUAUAUCCUCCUUAGCGAAGGCCGAAAAGAGGC
M2                                                                    GUAUCCUCCUCCUUAGCGAAGGCCGAAAAGAGGC
                                                                        *******************************
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Fig. 6

A

	CP7-5A	SL-2	SL-3	SL-5	SL-6	SL-7	SL-8	Δ2-31	Δ5-57
Plaque size (mm)	2.7	1.2	0.7	1.2	0.8	1.4	0.5	0.8	0.8

B

CP7-5A

SL-7

SL-8

Figure 7

Fig. 8

A

Viral titer (log₁₀ TCID₅₀/ml)

CP7-5A
SL-2
SL-3
SL-5
SL-6
SL-7
Δ2-31
Δ5-57

Hours postinfection

B

CP7-5A SL-2 SL-3 SL-5 SL-6 SL-7 Δ2-31 Δ5-57 n.i.

9.5 -
7.5 -

4.4 -

2.4 -

kb

Product   100   22   19   16   15   34   3   2   0